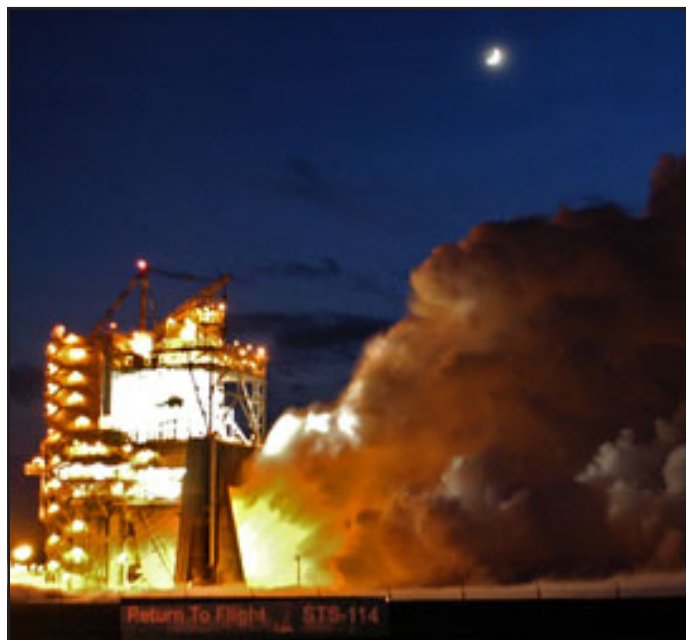


MARSHALL STAR

Serving the Marshall Space Flight Center Community

Sept. 9, 2004



Engineers successfully test the final of three Space Shuttle Main Engines on Aug. 19 at Stennis Space Center.

Engineers test final engine for NASA's Return to Flight

Engineers at NASA's Stennis Space Center in Mississippi have successfully tested what's expected to be the last of three Space Shuttle Main Engines that will carry the next Space Shuttle into orbit.

The engine tested Aug. 19 will be shipped to NASA's Kennedy Space Center, Fla., for installation on Space Shuttle Discovery for its Return to Flight mission, designated STS- 114. NASA plans to launch Discovery to the International Space Station no earlier than March 2005.

The test ran for 520 seconds, the length of time it takes a Space Shuttle to reach orbit. Initial indications are all test objectives were successfully met.

"Piece by piece, milestone by milestone, we're getting closer to flying the Shuttle again," said Michael Kostelnik, deputy associate administrator for International Space Station and Space Shuttle Programs. "This engine test is another important step to make sure we give the STS-114 crew a safe ride to and from the Space Station."

See Test on page 3

Graduates of NASA's leadership program honored

Members of the 2003-2004 Leadership Development Program completed their developmental year recently with a ceremony at NASA Headquarters.

The program participants, who represented nine centers, are the first graduates of the NASA Leadership Development Program. The program replaced the NASA Professional Development Program in support of the Agency's emphasis on improving leadership skills and effectiveness.

In his address to the graduates, NASA Deputy Administrator Frederick Gregory praised the graduates for completing their class project "Achieving Mission Success in the 21st Century through Collaboration." Gregory said that he was particularly thankful and impressed that the class did not recommend the Agency

See Leadership on page 2



Reginald A. Alexander, left, and Steven J. Goodman, right, were honored by NASA Deputy Administrator Frederick Gregory, center, for completing the 2003-2004 Leadership Development Program.

Marshall Director David King invites Center community to Family Fun Day

It is my privilege to once again invite the Marshall Community – civil servants, contractors, and retirees – to the Center's annual picnic. This year our event is called *The Marshall Center Family Fun Day and Fall Festival*. We are incorporating the Fall Festival theme because October is the perfect time of year to enjoy a carnival-like atmosphere while absorbing the change of the season.

There will be plenty of games, food, and entertainment. And, to make things easier, the Family Fun Day committee is selling passes to cover all games, food and entertainment. For the purchase of one ticket pass per person (prices vary according to age), you can enjoy every-

thing without having to stand in line to buy individual tickets. The ticket covers all the food you can eat, all the games you play, and all the entertainment you want. Watch the *Marshall Star* for details on ticket prices and purchase outlets.

Last year was great fun and we expect this year to be just as exciting and entertaining. The Marshall Community is important and coming together to have a day of fun and relaxation makes our community even more special. So mark your calendar for October 2, and make sure your camera and camcorder batteries are charged – it will be a day for capturing memories.

--- David King, Marshall Director

Job Announcements

MS04D0169 (Outside Hire), AST, Aerospace Flight Systems, GS-11 (promotion potential to GS-13), Flight Projects Directorate, Flight Systems Department. Closes: Sept. 16. Contact: Carolyn Lundy, 544-4049.

MS04D0170 (Outside Hire), AST, Aerospace Flight Systems, GS-13, Flight Projects Directorate, Flight Systems Department. Closes: Sept. 16. Contact: Carolyn Lundy, 544-4049.

MS04N0182 (reassignment), AST, Data Hardware Systems, GS-13, Center Operations Directorate, Office of the Chief Information Officer. Closes: Sept. 17. Contact: Dana Blaine, 544-7514.

NASA falls to Army in all-star softball championship



Photos by Skip Vaughn, Redstone Rocket



The NASA all-star softball team saw their title of Arsenal-wide 2004 Softball Champion disappear with the crack of Army's Guy Chanpuang's bat during the Aug. 31 championship game. Chanpuang hit a two-run single up the middle and Army won 12-11 to earn the Redstone 2004 championship trophy. In left photo, Marshall Center players get ready in their dugout at Linton Field on Redstone Arsenal. Glenn Lundy, at bat in right photo, starts the Army's comeback with a two-run homer during the fourth inning when they grabbed six runs.

Leadership

Continued from page 1

take on a collaboration initiative, but rather they took what they learned about collaboration and infused it into existing initiatives and efforts such as One NASA, the Academy of Program-Project Leadership curriculum and many other efforts. As a result of their project the 2003-2004 class identified 75 collaboration best practices. A link to the full report of their findings and recommendations can be

found on the Leadership Development Program home page at <http://ldp.nasa.gov/>

Three participants from the class, Judy Robinson of Johnson Space Center, Steven J. Goodman of the Marshall Center and Reginald A. Alexander of the Marshall Center, were elected to speak at the graduation and share their reflections of the year and their thoughts on leadership.

Alexander and Goodman represented Marshall in the program.

The vision of the Leadership Development Program is to create powerful leaders who align with NASA's vision, mission and values and who create results that matter to the American people. Program elements include developmental assignments, a class project, individual coaching, training and briefings by NASA and outside leaders. Participants must be grades 13-15 and are competitively selected at the Agency level.

Test

Continued from page 1

"Our NASA and contractor team has continued to work hard over the past year and a half to make sure the Shuttle's main engine — this incredible piece of machinery — maintains its safety record," said Miguel Rodriguez, director of the Propulsion Test Directorate at Stennis. "All the effort will pay off when we see Discovery lift off next year."

Engineers conduct rigorous testing to verify that an engine is ready to fly. Developed in the 1970s, the Space Shuttle Main Engine is the most advanced liquid-fueled rocket engine ever built and the first reusable one.

Temperatures inside the engines reach 6,000 degrees Fahrenheit — hot enough to melt iron — and the pressure mounts to as high as 6,000 pounds per square inch. During the eight-and-a-

half minutes the Shuttle's three Main Engines burn, they produce energy equivalent to 23 Hoover Dams — about 37 million horsepower. Each engine is 14 feet long, weighs about 7,000 pounds and is 7.5 feet in diameter at the end of its nozzle. It generates almost 400,000 pounds of thrust.

The successful completion of this test is another milestone in our efforts to return the Space Shuttle safely to flight," said Gene Goldman, manager of the Space Shuttle Main Engine Project Office at the Marshall Center. "There has been a tremendous effort by the team at Stennis, both civil servant and contractor, to ready the engines for flight. Their diligent attention to detail is critical to the safe and reliable performance of the engines."

Marshall Association scholarship winners



The Marshall Association awarded a \$1,500 scholarship last month to Keara Dowling and Jesse Elrod. Each year the association gives scholarships to entering freshmen who are dependents of Marshall Center employees or retirees. Elrod, above center, accepts the scholarship check from Robin Henderson, left, Marshall Center associate director and Marshall Association president. Nelson Parker, right, scholarship committee chairman, looks on. Below, Tim and Marylynn Dowling, center, parents of Keara Dowling, accept the scholarship award on their daughter's behalf from Henderson and Parker.



Photos by David Higginbotham, Marshall Center

Chandra catches early phase of cosmic assembly

From the Smithsonian's Astrophysical Center

A NASA Chandra X-ray Observatory image has revealed a complex of several intergalactic hot gas clouds in the process of merging. The superb Chandra spatial resolution made it possible to distinguish individual galaxies from the massive clouds of hot gas. One of the clouds, which envelopes hundreds of galaxies, has an extraordinarily low concentration of iron atoms, indicating that it is in the very early stages of cluster evolution.

"We may be seeing hot intergalactic gas in a relatively pristine state before it has been polluted by gas from galaxies," said Q. Daniel Wang of the University of Massachusetts in Amherst, and lead author on an upcoming *Astrophysical Journal* article describing the study. "This discovery should provide valuable insight into how the most massive structures in the universe are assembled."

The complex, known as Abell 2125, is about 3 billion light years from Earth and is seen at a time about 11 billion years after the Big Bang. This is a period when astronomers believe many galaxy clusters are formed. Chandra's Abell 2125 image shows several huge elongated clouds of multimillion-degree-gas coming together from different directions. These hot gas clouds, each of which contains hundreds of galaxies, appear to be in the process of merging to form a single massive galaxy cluster.

Chandra, Hubble Space Telescope, and Very Large Array radio telescope data show that several galaxies in the Abell 2125 core cluster are being stripped of their gas as they fall through surrounding high-pressure hot gas. This stripping process has enriched the core cluster's gas in heavy elements such as iron.

NASA's Marshall Center manages the Chandra program for NASA's Office of Space Science.

Center Operations Directorate holds awards day



Judy Glenn, left, receives the Marshall Values and Principles award from Jim Carter, director of the Center Operations Directorate.



Jim Ellis, right, Chief Information Officer, presents Kim Narmore with a Peer Award.

Photos by Emmett Given, Marshall Center



Arthur Patrick, left, receives a Peer Award from Allen Elliott, manager of the Environmental Engineering Department.



Neil Rogers, right, receives the Marshall Values and Principles award from Jonathan Pettus, manager of the Integrated Financial Management Program Competency Center.



Tim Corn, left, deputy manager of the Facilities Engineering Department, presents a Peer Award to Leonard Nicholson.



Nancy Putman, left, receives a Peer Award from Patrick Rasco, deputy manager of the Integrated Customer Support Department.

Announcements

Get all the fun, food for one price at Marshall Fun Day

The annual Marshall Center Family Fun Day will be from 10 a.m.- 2 p.m. Oct. 2 at the Marshall picnic grounds. Games, entertainment, concessions, food, soft drinks and bottled water will be offered for one price. Tickets are \$8 for children ages 4-12 and \$12 for ages 13 and older until Sept. 24. After that date ticket prices will increase. There is no cost for ages 3 and under. Tickets can be purchased from the Internal Relations and Communications Department in Bldg. 4200, Room 101; the Space Shop in Bldg. 4203; or administrative officers. Retirees can purchase tickets by mail from the Internal Relations department. For more information, call 544-1382.

Patton bridge, Martin Road eastbound lanes closed

Two eastbound lanes of Martin Road will be closed until mid-October during repairs on the Patton Road Bridge overpass. Motorists should exercise caution in the area and/or seek alternate routes. For more information, see "Inside Marshall."

Monday seminar to focus on preparing for returning vets

A free public seminar titled, "Are You Prepared for the Returning Vet" will be from 6-8 p.m. Monday at Corporate University Auditorium at 101 Sivley Road at Governors Drive across from Huntsville Hospital West. The seminar is to understand the effects of combat and how to help soldiers returning home. Fox Army Behavioral Medicine, the Association of the U.S. Army, Bradford Health Services, and Army Community Services are sponsoring the event. For more information or to register, call 876-9085.

Unified Account Management System is available for use

Marshall Center employees may now request accounts on the Web instead of using paper forms -- MSFC Form 4194, MSFC Form 4434, and IFM SF1700 -- by accessing the Unified Account Manage-

ment System (UAMS). Users are able to request modification to existing accounts and request that accounts be deleted. The UAMS Web site is <https://arsweb.msfc.nasa.gov/uammainmenu.asp>. Paper forms will still be accepted during the transition period. For more information, call the NASA Information Support Center at 544-HELP, option 0.

North Alabama-NASA Business Forum set for Sept. 20

The Huntsville-Madison County Chamber of Commerce and the Northeast Alabama Regional Small Business Development Council will hold a one-day workshop to learn how to do business with NASA and the Marshall Center on Sept. 20 at the Von Braun Center, North Hall. Marshall Center representatives will discuss upcoming contracting opportunities. Registration fee is \$55 (\$45 for chamber members) until Sept. 10. After that date, the fee increases by \$25. Register at <http://ec.msfc.nasa.gov/cgi-bin/sbd/forum/forum.cgi> or call the chamber at 535-2027.

Marshall-sponsored reliability meeting will be Oct. 4-6

The fall meeting of the Society of Mobility Engineers -- Reliability, Maintainability, Supportability and Logistics Division -- and Probabilistic Methods Committee is Oct. 4-6 at the Huntsville Hilton. The meeting will provide industry, government and academia a forum to review RMSL technologies, reliability-based design methods, software reliability, and more. Rex Geveden, Marshall Center deputy director, will speak. For more information or to register, go to <https://shop.sae.org/misc/regforms/g-11.shtml>

Deadline for ordering Saturn V license plate is January

Alabama residents interested in purchasing a Saturn V license plate for a vehicle still have time to register for one by going to their county Department of Revenue Motor Vehicle Division office. A "Commitment to Purchase" form must be filled out. The license plate costs an extra \$50.

The state will only issue the distinctive license plate if 1,000 applications are received before January.

2004 Combined Federal Campaign kickoff set for Sept. 28

The 2004 Combined Federal Campaign kickoff at the Marshall Center will be at 10 a.m. Sept. 28 in Morris Auditorium. This year's theme is "You Are Not Alone." An "Agency Fair" will be from 10 a.m.- 2 p.m. Sept. 30 in Bldg. 4316. The fund-raising campaign, which benefits local agencies, will run from Oct. 4-Nov. 12. "Community Service Days" will be Oct. 12-Nov. 12 for Marshall employees to participate in area service projects. Each year, Marshall employees are granted four hours of administrative leave to participate in these projects. Community Service Days T-shirts are available for \$9 through Sept. 21. To order a shirt, go to <http://oscar.msfc.nasa.gov/co/cfc2004.nsf/order> or see "Inside Marshall."

Retired federal employees to meet Saturday

The National Association of Retired Federal Employees will be Saturday at 9:30 a.m. at the Senior Center on Drake Avenue in Huntsville. Guest speaker will be Madison County Probate Judge Tommy Ragland. For more information, call 881-4944 or 882-2406.

MARS Tennis Club to hold doubles tournament Saturday

The MARS Tennis Club will hold a hi-lo doubles tournament at 8 a.m. Saturday at the NASA Tennis Court. In the hi-lo format, participants will be matched with a partner at the tournament. The event is closed to the public. For more information, call Bill Boglio at 544-3806.

Redstone Reunion is Sept. 30-Oct. 1

This year's Redstone Reunion will be held Sept. 30 - Oct. 1 in Titusville, Fla. The cost is \$40. Everyone who participated in the Redstone programs is invited. Call Karen Conklin or Jamye Flowers Coplin at 321-264-0434 for more information.

Classified Ads

Miscellaneous

Pearl snare drum w/case, sticks, pad, stand, key, lesson books, \$200. 882-6449

Ceiling fan, 5-blade w/four light globes, \$25. 882-1779

Large wooden table, \$45; bathroom vanity, \$100; electric range w/microwave, \$100; treadmill, \$70. 256-534-0939

Sears Craftsman 4" work vise, new, \$30; Portable 500-watt Halogen work light w/tripod, new, \$35. 518-9942

Solid Mahogany antique china cabinet, glass door front, \$100. 256-652-0462

Kincaid cherry wood 3-piece entertainment center, 6'Hx8'W, \$1,200. 828-0756

Short blue sofa, \$35. 430-6842

Meade 10' LX-50 SCT telescope with computer controller, many extras. 882-0431

Electric Trimmer/Edger 4 lawncare w/2 replacement trimmer string packs, \$40. 961-0211

Taylor made junior golf clubs w/graphite shafts & bag, \$150. 882-1696/evenings

Power Wheels jeep, \$60; child bike trailer, \$85, child front bike seat, \$15. 852-4602

All genuine leather "Oxford" living room set, couch, loveseat, chair, & ottoman, \$2,200. 777-6316/Madison

Office trailer, 8x20, concrete steps w/handrail, can be moved w/full-sized truck, \$3,800. 256-739-9467

Two Audiobahn 10" subwoofers "Flame Series", 520Watt SPL, 2-channel amp, sealed truck box, \$300. 256-232-4907

PSE bow, Toxonic sight quiver, PSE overdraw, rest, 12 arrows, release, long draw length. 256-498-6568

Amana white washer & dryer, 5 years, \$250; sofa & love seat, \$150. 722-7959

Two male ferrets, large deluxe cage, pet carrier/transporter, \$200. 430-0755

Fishing boat, 14' flat bottom, 6HP motor, trolling motor, depth finder, live well, \$1,250. 256-784-5299

Basketball hoop and pole, portable stand alone, regulation height, adjustable, \$75. 859-1483

Sofa, rust and earth tones, \$250. 828-3653 after 5 p.m.

Advantage Arms conversion kit, .22LR, for Glock Model 17 or 22 w/two magazines, original accessories, \$180. 461-8071

Maytag dryer, \$95; Kenmore washer, \$100. 837-6649

Water-filled & hanging punching bags, \$40 each; two Queen Anne arm chairs, \$150. 464-9408

2001 Procraft 180 combo fish & ski, 150 Mercury w/all extras, \$900. 256-348-4899/lv. msg.

Commercial Wolff tanning bed, 26 new bulbs, separate face tanner, built-in stereo, \$1,800. 963-7996

Military Surplus/cargo parachute, 30' diameter, olive green, \$95. 830-1820

Vehicles

2003 Dodge 2500, 4x4, Hemi Quad cab, Laramie, loaded, 26k miles, black w/leather interior, \$26,200. 256-656-1836

2000 Miata, white, 27k miles, am/fm/cassette/cd, air dam, garage kept, \$10,880. 881-8130/Edmunds

1990 Born Free Class C motor home, 24', new transmission, tires, brakes, 4kw generator. 256-653-0471

1994 Infiniti Q45 sedan, green, service current, 135k miles, tan leather, cd, a/c, \$4,950. 256-859-8798

2000 Ford Taurus SE, 56k miles, \$6,199. 353-3229

1990 Camaro RS w/350TPI, exterior good, interior needs work, engine needs tuned, \$2,500. 931-762-5846

2001 F150 Lariat, \$17,500; 2002 Honda Shadow, \$5,000; Polaris ATV, \$1,800. 881-9753

1993 Ford Ranger extended cab, v6, 5-speed, a/c, \$2,200. 325-6000/Silver

2003 Chevy Z71 LT extended cab, white, leather, 4wd, OnStar system, under warranty, \$27,000. 864-9920

2003 Honda Rancher ES, 4x4, hunter green, garage kept, \$3,800. 256-891-1073

2000 Cadillac Deville DTS, loaded, black/lt. tan, 61.4k miles, ext. warranty, \$21,900. 837-5874

1998 Pontiac Grand Prix GTP, red/black leather, sunroof, cd, loaded, 73k miles, \$8,000. 721-3945

1988 Honda Accord LXI hatchback,

working a/c, needs some work, \$600. 882-9591

2003 Chevrolet Silverado, 25k miles, many extras, new Michelin tires, 7/75 warranty, \$15,000. 256-714-9180

1993 Chevy Blazer, gray, auto, a/c, 103k miles, pw/pl, cruise, \$3,300. 520-2802/Ron

1999 CL03 Acura, white, leather, sunroof, all extras, 59k miles, \$15,000. 536-5132

1993 Ford Taurus, 313k miles, black, \$1,000. 722-0893 after 5 p.m.

2002 Winnebago Adventurer, 35', Ford V10, sleeps 6, w/warranty, \$83,000. 256-520-0816

2000 Ford Windstar, 97k miles, 5-door, burgundy, all-power, cloth seats, \$6,200. 828-7377

1995 Chevy Blazer LS, 4wd, 4-door, black, \$4,700. 859-5089

1989 Honda Civic DX, 186k miles, 5-speed, \$750. 830-4191

2001 Toyota Corolla S, auto, a/c, all-power, black, 98k miles, 39mpg highway, \$6,500. 256-426-2516

2004 Mustang Mach 1, black, loaded, leather, tint, shaker hood, 13k miles, \$23,000. 256-784-9025

1991 Buick Regal sedan. 534-8922

1991 Honda Accord EX, auto, all-power, green, cruise, sunroof, 206k miles, \$2,300. 256-379-3856

1998 Toyota Sienna XLE, 152k miles, double rear doors, 6-cyl., \$9,600. 457-3355

2003 Harley-Davidson 100th year anniversary Sportster, custom, black/silver, 1900 miles, \$10,500. 464-5850

1993 Mazda Navajo SUV, 2nd owner, v6, 5-speed, all options, 110k miles, \$2,795. 880-6441

Wanted

Honda Accord or Civic, less than 60k miles, 1999-2001. 883-2757

Camper w/head & shower to rent for Talladega, 9/30-10/4. 426-8862

Pickup bedcover for Toyota short wheel base truck. 772-9955

Salt water fishing rods & reels, reasonably priced. 256-883-6446

Standard size refrigerator for home. 605-3893

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